

REMARKS/ARGUMENTS

The above amendment is provided in response to the 3/1/06 Office Action. This amendment, amends claims 1, 2, 4, and 6, and cancels claim 5, and 11, and adds new claims 17-20. Following this amendment claims 1-4, 6-10, and 12-20 are pending in the present application.

The 3/1/06 Office Action rejected claims 1-12 and 14-16 under 35 USC 102(e) as being anticipated by US Patent Application 2003/0110330 (Fujie et al).

The Rejection of Claims 1-3:

Claim 1 is directed to a removable storage module which includes a housing in which a plurality of disk drives are disposed. Additionally, disposed in the housing of the removable storage module are a plurality of switches. An I/O channel for each of the disk drives is coupled with a first port of a corresponding switch. Each of the switches has a second and third port, and these second and third ports are then coupled with a connector of the removable storage module. The switch then provides coupling the I/O channel of the drive with the connector through either the second or third ports of the switch. The connector then provides for a connection of I/O channels of the drives to either a first plurality of host channels, or a second plurality of host channels. The connector also operates to provide a power supply voltage which is used in the removable storage module to drive the plurality of drives.

It is respectfully submitted that a removable storage module having a plurality of drives, and switches, and a single connector which provides the power, and I/O channels to the removable storage module is very different than anything disclosed in or suggested by Fujie. Further, a removable storage module which provides for a housing which contains the plurality of drives, and switches, and a connector, which operates to selectively couple the I/O ports of the plurality of drives with a plurality of first host channels, or a plurality of second host channels, appears to be very different than anything disclosed or suggested by Fujie.

For example, the 3/1/06 Office Action makes repeated reference to Fig. 2 of Fujie in rejecting the claims, and refers to paragraphs 39-44 of Fujie. It appears that Fujie is directed to a system which is designed to determine when one of two different controllers in the system fails. When a failure of one of the controllers is detected than the other controller will take over “and enables data on a mirror disk side to be transferred to the host computer without giving any load to the host computer.” Fujie, para. 0043. Fujie describes a process where the operating

controller, which detects a failure in the other controller, drives the switching means so that it can access the drives where the failure occurred. Fujie, para. 0044. The operating controller then appears to operate to facilitate the communication between the storage devices and the host which is connected to controller that was determined to have failed. Fujie, para. 0046.

It would appear that this system of Fujie is very different than the system recited by claim 1. For example, while there does appear to be some switch mechanism so that a second controller can access the storage device, when the second controller gains access to the storage devices through the switching means, the second controller then appears to take over the operation of the failed controller, and is operates to facilitate communication between the host that was connected with the failed controller and the storage devices. However, the switching means 34 of Fujie, does not appear to operate to switch between different ports, which are then coupled with the either a first host communication channel or a second host communication channel.

Another very significant difference is that the removable storage module as recited by claim 1 is in fact a removable module, with a housing which secures the drives, switches, and a connector which operates to both provide I/O channels, and power to the removable storage module. The system shown in Fujie is very different in that it appears to be a system where the switching means is distinct from the storage devices. For example, see Fig. 2 of Fujie. In addition, Figs. 14- 16 of Fujie appear to show a range of different aspects of the system of Fujie. As shown in these figures it appears that rather than providing for a removable storage module having a plurality of drives and corresponding switches which are coupled to I/O channels and a power supply via a single connector, Fujie appears to provide for a system in which each of the elements area separate and then interconnected to various other elements of the system in a chassis. Notably, the system shown and described in Fujie would clearly appear to lack a connector which provides for supplying both power and I/O channel communications for each of the drives and switches contained in a removable storage module. Thus, it is respectfully submitted that in light of the reasons set forth above, claim 1 is patentable over the references. Further, claims 2-3 depend from claim 1 and are thus respectfully submitted to be patentable over the references for at least the same reasons as claim 1.

The Rejection of Claims 4-10:

Claims 4-10 were rejected largely based on the paragraphs 39-44 and Fig. 2 of Fujie. As shown above claim 4 has been amended. Specifically, claim 4 was amended to incorporate elements from its former dependent claim 5, which is canceled by the present amendment. It is respectfully submitted that pending claim 4 is clearly distinguishable over the teaching of Fujie. Claim 4 recites a removable storage system which includes a removable storage module having a plurality of disk drives, and each of the disk drives having an I/O channel. Additionally, the system includes switches corresponding to each of the drives, and a controller which controls each of the plurality of switches such that each of the plurality of switches couple the I/O channel of the plurality of drives with either a second port or a third port of the switch. The system also includes:

a docking base unit having an A channel and a B channel for each of the plurality of disk drives;

wherein the A channels of the docking base unit are coupled with a first computer, and the B channels of the docking base unit are coupled with a second computer; and

wherein the A channels are coupled with the second port of the plurality of switches, and the B channels are coupled with the third port of the plurality of switches.

It is respectfully submitted that claim 4 includes elements which are very different than anything disclosed or suggested by Fujie. For example, claim 4 provides that the A channels are coupled with the second port of the switches, and the B channels are coupled with a third port of the switches. Thus, the toggling of the switch will operate to couple the I/O of the drives with either the first computer or the second computer.

It is noted that the 3/1/06 Office Action specifically discussed some of the elements of claim 5 which area now incorporated into amended claim 4 above. However, it is respectfully submitted that the 3/1/06 Office Action in connection with claim 5 appears to misinterpret the teaching of Fujie. For example, the switching means in Fujie, as discussed above, does not appear to connect the drives with a different host computer; rather the switching means Fujie appears to operate to allow a functioning controller to replace a non-function controller so that a host computer coupled with the failed controller can continue to utilize the storage devices of the system even where one of the controllers has failed. See e.g. Figs 2, and 3, of Fujie, and paras

46, 47 of Fujie. Specifically, it appears that regardless of the position of the switch means shown in Fig. 2 of Fujie, in Fujie the host computer that issued a read request from the storage media would receive the information regardless of the position of the switching means.

The system recited by claim 4 is significantly different in that it provides for a switch having a corresponding drive, and the I/O of the drive is coupled with either a first computer connected to an A channel, or a second computer connected to a B channel depending on the position of the switch. It is respectfully submitted that this operation is very different than the teaching of Fujie. Thus, claim 4 is submitted to be patentable over the references. Further claims 6-10 depend from claim 4 and are respectfully submitted to be patentable for at least the same reasons as claim 4.

The Rejection of Claim 11:

Claim 11 was rejected largely based on the paragraphs 39-44 and Fig. 2 of Fujie, as were claim 1 and 4 discussed above. Previously pending claim 11 has been canceled without prejudice to the possible filing of continuation, continuation-in-part, or request for continued examination case, with the same or similar type of claim. The cancellation of the claim 11, herein, is provided to expedite the prosecution of the other claims presently remaining in the this application.

The Rejection of Claims 12-16:

Independent claim 12 was rejected largely based on the paragraphs 39-44 and Fig. 2 of Fujie. Claim 12 provides for a removable disk drive module having a plurality of disk drives, and a docking base unit having a pair of I/O channels corresponding to each of the plurality of disk drives, where a first channel of the pair of I/O channels is connected with a first computer, and a second channel of the pair of I/O channels is connected with a second computer, and a plurality of switches, wherein each of the switches corresponds to one of the disk drives of the plurality of disk drives, and a first port of each of the switches is coupled with an I/O channel of the corresponding disk drive, and each of the plurality of switches has a second port and a third port, and the second port is coupled to the first channel of pair of channels which correspond to the disk drive, and the third port is coupled to the second channel of the pair of channels which correspond to the disk drive. This system recited by claim 12 provides for a configuration which

is very different than anything provided for by Fujie. Specifically, the position of the switches in the system of claim 12 allow for the I/O of the individual drives to be coupled via the I/O channels of the docking base unit to either the first computer, or the second computer. As discussed above in greater detail the system of Fujie appears to be very different for a number of reasons. For example the switch means of Fujie does not appear to change the coupling of the I/O channel of the drives with different computers. Rather, the toggling of the switch means in Fujie appears to provide for changing the operation of the controllers, but it does not appear to change the I/O channel of the drive such that it selects which host computer the storage device is in communication with.

Thus, it is respectfully submitted that claim 12 is patentable over the references. Further claims 13-16 depend from claim 12 are respectfully submitted to be patentable over the references for at least the same reasons as claim 12.

New Claims 17-20:

Independent claim 17 and dependent claims 18-20 are as shown above. These claims do not add new matter. In very summary form claim 17 recites among other things a storage system having a removable storage module, where the removable storage module includes a plurality of drives, and plurality of switches. The switches are then used to control connections with the plurality of I/O channels which are provided in the docking base unit to couple the drives with either a first or a second computer. It is respectfully submitted that as discussed above this type of system is not disclosed or suggested in Fujie teaching. Further claim 17 provides for a first and second connector which are coupled together to connect the I/O channels and the power supply from the docking base unit to the removable storage module. It is respectfully submitted that this element is not disclosed in or suggested by the references. Thus it is respectfully submitted that claim 17 and its dependent claims are patentable.

Conclusion

In view of the above, it is respectfully submitted that the application is now in condition for allowance. Reconsideration of the pending claims and a notice of allowance are respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter

filed in this application by this firm) to our Deposit Account No. 50-2001 under Order No. ZMIC-600. **A duplicate copy of the transmittal cover sheet attached to this Response is provided.**

Respectfully submitted,

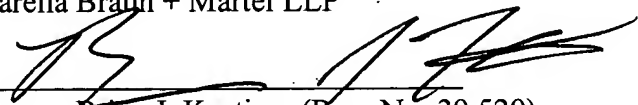
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Respectfully submitted,

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Dated: 6-1-, 2006

By: _____



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Atty Docket No. Zmic-600